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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,099	02/27/2004	Joseph L. Hellerstein	YOR920030549US1 (590.127)	9008
35195 7590 11/24/2008 FERENCE & ASSOCIATES LLC 409 BROAD STREET PITTSBURGH, PA 15143			EXAMINER ZHE, MENG YAO	
			ART UNIT 2195	PAPER NUMBER
			MAIL DATE 11/24/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/789,099	<b>Applicant(s)</b> HELLERSTEIN ET AL.	
	<b>Examiner</b> MENG YAO ZHE	<b>Art Unit</b> 2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. Claims 1-23 are presented for examination.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- A. The following claim languages are unclear and indefinite:

- i) Claim 1, it is uncertain what the relationships are amongst "RFC" of line 2, "individual tasks" of line 5 and "job" of line 8 <i.e. it seems that RFC is composed of tasks, if so, are jobs also part of the RFC? Consistent names should be used.>.

Claims 12, 23 have the same deficiencies as claim 1 above.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2195

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 12, 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Hayes, Pub No. 2002/0198923 (hereafter Hayes).

5. As per claims 1, 12, 23, Hayes teaches a method for planning and scheduling tasks within at least one request for change (RFC) within a change window in a computing system, comprising the steps of :

deciding whether or not an RFC should be done (Para 44);

for each RFC to be done, assigning individual tasks within each RFC to a acceptable servers; (Para 27, 29: a class corresponds to one RFC, and each device need corresponds to individual tasks; Para 37);

for each RFC to be done, assigning the start times to said individual tasks (Para 46);

wherein the RFC describes at least one job to be done on at least one target computing system (Para 26, 29);

wherein the at least one job is selected from a group consisting of hardware changes and software changes (Para 4, 27);

wherein the change window describes a period of time during which the RFC is to be done (Para 30).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayes, Pub No. 2002/0198923 (hereafter Hayes) in view of A Duality Approach to Admission and Scheduling Controls of Queues, Susan H. Xu, 1994 (hereafter Xu).

8. Xu was cited in the previous office action.

9. As per claims 3, 14, Hayes does not specifically teach maximizing the value of all RFCs done wherein the value is a profit value derived from performing a plurality of jobs associated with a selected subset of the tasks; and wherein the profit value for each task is expressed as a value of performing the job minus the value of associated costs.

However, Xu teaches the step of maximizing the value of all RFCs done (Abstract, lines 3-5); wherein the value is a profit value derived from performing a plurality of jobs associated with a selected subset of the tasks; and wherein the profit value for each task is expressed as a value of performing the job minus the value of

Art Unit: 2195

associated costs (Abstract; Pg 274, 2<sup>nd</sup> Para), for the purpose of scheduling optimization.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to modify the teachings of Hayes with maximizing the value of all RFCs done wherein the value is a profit value derived from performing a plurality of jobs associated with a selected subset of the tasks; and wherein the profit value for each task is expressed as a value of performing the job minus the value of associated costs, as taught by Xu, because it allows for scheduling optimization.

Claims 4-7, 10-11, 15-18, 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayes, Pub No. 2002/0198923 (hereafter Hayes) in view of Games, Critical Paths and Assignment Problems in Permutation Flow Shops and Cyclic Scheduling Flow Line Environments, 1992, (hereafter Kiran).

10. Kiran was cited in the previous office action.

11. As per claims 4, 15, Hayes does not specifically teach maximizing the number of RFCs done.

However, Kiran teaches the step of maximizing the number of RFCs done for the purpose of optimization. (Pg 255, 1<sup>st</sup> and 2<sup>nd</sup> Para: by minimizing downtime, number of tasks to be done is inherently maximized since downtime is utilized to perform more tasks.).

Art Unit: 2195

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to maximizing the number of RFCs done, as taught by Kiran, because it allows for optimization.

12. As per claims 5, 16, Kiran teaches the step of minimizing total downtime (Pg 255, 1<sup>st</sup> and 2<sup>nd</sup> Para).

13. As per claims 6, 17, Kiran teaches the step of minimizing the costs associated with downtime (Pg 255, 1<sup>st</sup> and 2<sup>nd</sup> Para).

14. As per claims 7, 18, Kiran teaches the step of minimizing the total execution time in implementing a task (Pg 255).

15. As per claims 10, 11, 21, 22, Hayes in view of Kiran does not specifically teach the step of minimizing the average response time and the weighted average response time of each RFCs. However, it would have been obvious to one having ordinary skill in the art of scheduling optimization at the time of the applicant's invention to optimize the response time of the RFC in order to optimize the entire scheduling plan so that penalty is reduced.

16. Claims 2, 8-9, 13, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayes, Pub No. 2002/0198923 (hereafter Hayes) in view of Crawford et al., Patent No. 6,456,996 (hereafter Crawford).

17. Crawford was cited in the previous office action.

18. As per claims 2, 13, Hayes does not specifically teach reserving all the servers involved for the duration that begins at the start of the first task and ends at the finish of the last task for each RFC that should be done.

However, Crawford teaches the step of reserving all the servers involved for the duration that begins at the start of the first task and ends at the finish of the last task for each RFC that should be done (Column 5, lines 5-20) for the purpose of meeting constraints.

It would have been obvious to one having ordinary skill in the art to combine the teachings of Hayes with reserving all the servers involved for the duration that begins at the start of the first task and ends at the finish of the last task for each RFC that should be done, as taught by Crawford, because it helps to meet constraints.

19. As per claims 8, 19, Crawford teaches the step of maximizing the number of RFCs meeting their deadlines (Column 4, lines 15-22).

20. As per claims 9, 20, Crawford teaches the step of minimizing multiple deadline penalties associated with the RFCs and/or their respective tasks (Column 4, lines 15-22).



***Response to Arguments***

21. Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

22. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MENGYAO ZHE whose telephone number is (571)272-6946. The examiner can normally be reached on Monday Through Friday, 7:30 - 5:00 EST.

Art Unit: 2195

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Meng-Ai An/  
Supervisory Patent Examiner, Art Unit 2195